

## MEMORANDUM

**TO** Dawn MacNeil, STPA  
**FROM** Dianne Theriault  
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**DATE** 12<sup>th</sup> March, 2009

**FILE NO.** S-1279-06  
**SHIFT:** 0730 to 1730  
**CC:** Shawn Bernon, STPA  
Wilfred Kaiser, STPA  
Terry Smith, ALL-TECH  
**STPA NO.** TP2-0122

**SUBJECT: 11<sup>th</sup> March, 2009, Real-time Air Monitoring Results  
Sydney Tar Ponds Agency – Material Processing Facility  
FINAL REPORT**

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Attached is a summary of Real-time particulate (as PM<sub>10</sub>) results for air monitoring performed on the 11<sup>th</sup> of March, 2009. Tyler Rowe and Alison Giovannetti, of ALL-TECH Environmental Services Cape Breton Limited (ALL-TECH), performed all air monitoring activities.

Weather conditions on the day of sampling:  
- Mainly sunny, cloudy periods  
- Temperature: approximately 1°C  
- Wind Direction: East to Southwest

**Comments:** *ALL-TECH was on-Site at 0730 hours and sampling began as soon as there was site activity. Air monitoring was performed during AECOM's construction activities.*

All downwind and upwind measurements of PM<sub>10</sub> were below the established Site Action Level for this parameter of 155 µg/m<sup>3</sup>.

All downwind and upwind measurements of Total Volatile Organic Compounds (TVOC) were below the established Site Action Level for this parameter of 0.66 ppm. Each measurement is the average of a 15 minute sample. A minimum of 2 samples were taken downwind and 1 sample upwind every hour. All measurements were found to be below the detection limit of the instrument. Levels above detection limit will be noted in the table below.

Due to operational criteria, during periods of precipitation (snow and rain) and high humidity, TVOC sampling is halted and resumes after the precipitation has ended.

This report has been prepared by Tyler Rowe and reviewed by Dianne Theriault. If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,



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Dianne Theriault, B.Tech  
Environmental Technologist  
**ALL-TECH Environmental Services Cape Breton Ltd.**

Copied via e-mail:

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**Real-time Airborne PM<sub>10</sub> Concentration Results**  
**Sydney Tar Ponds Agency – Material Processing Facility**  
**11<sup>th</sup> March, 2009**

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
1 Inglis Street, 50m North of Spar Road	0800	155	23	East	Upwind	Background	No observations seen to affect sampling integrity
2 Railway property, 100m North of Ferry Street	0800	155	23	East	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
3 Railway property, 100m North of Ferry Street	0835	155	19	East	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
4 Inglis Street, 50m North of Spar Road	0900	155	19	East	Upwind	Background	No observations seen to affect sampling integrity
5 Railway property, 100m North of Ferry Street	0900	155	16	East	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity
6 Railway property, 100m North of Ferry Street	0920	155	20	East	Downwind	Site not visible from sampling location	No observations seen to affect sampling integrity

<b>Sample No. &amp; Air Monitoring Location</b>	<b>Time of Day</b>	<b>PM<sub>10</sub> Action Level (µg/m<sup>3</sup>)</b>	<b>Average Result (µg/m<sup>3</sup>)</b>	<b>Wind Direction</b>	<b>Relative Position</b>	<b>Description of Activity</b>	<b>Observations that may affect sample</b>
7 Railway property, 30m North of Ferry Street	1000	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
8 Inglis Street, 150m North of Spar Road	1000	155	23	Southwest	Downwind	Boom operating	No observations seen to affect sampling integrity
9 Inglis Street, 150m North of Spar Road	1045	155	23	Southwest	Downwind	No activity visible from sampling location	No observations seen to affect sampling integrity
10 Railway property, 30m North of Ferry Street	1100	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
11 Inglis Street, 150m North of Spar Road	1100	155	13	Southwest	Downwind	Cement truck unloading	No observations seen to affect sampling integrity
12 Inglis Street, 150m North of Spar Road	1115	155	28	Southwest	Downwind	Cement truck unloading	No observations seen to affect sampling integrity
13 Railway property, 30m North of Ferry Street	1200	155	10	Southwest	Upwind	Background	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
14 Inglis Street, 150m North of Spar Road	1200	155	65	Southwest	Downwind	No activity observed on site	Salt dust from street
15 Inglis Street, 150m North of Spar Road	1230	155	35	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
16 Railway property, 30m North of Ferry Street	1300	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
17 Inglis Street, 150m North of Spar Road	1300	155	11	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
18 Inglis Street, 150m North of Spar Road	1340	155	32	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
19 Railway property, 30m North of Ferry Street	1400	155	8	Southwest	Upwind	Background	No observations seen to affect sampling integrity
20 Inglis Street, 150m North of Spar Road	1415	155	20	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity

Sample No. & Air Monitoring Location	Time of Day	PM <sub>10</sub> Action Level (µg/m <sup>3</sup> )	Average Result (µg/m <sup>3</sup> )	Wind Direction	Relative Position	Description of Activity	Observations that may affect sample
21 Railway property, 30m North of Ferry Street	1500	155	9	Southwest	Upwind	Background	No observations seen to affect sampling integrity
22 Inglis Street, 150m North of Spar Road	1500	155	34	Southwest	Downwind	Excavator operating	No observations seen to affect sampling integrity
23 Inglis Street, 150m North of Spar Road	1520	155	11	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
24 Railway property, 30m North of Ferry Street	1600	155	7	Southwest	Upwind	Background	No observations seen to affect sampling integrity
25 Inglis Street, 150m North of Spar Road	1600	155	13	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity
26 Inglis Street, 150m North of Spar Road	1645	155	34	Southwest	Downwind	No activity observed on site	No observations seen to affect sampling integrity

**Notes:** Air sample duration for each monitoring event was 15 minutes.

### Comparison of Downwind Daily Results for Dust Budget

Location	Duration	Dust Budget Value ( $\mu\text{g}/\text{m}^3$ )	Dust Budget Exceedance Value ( $\mu\text{g}/\text{m}^3$ )
Railway property, 100m North of Ferry Street	0800 to 0859	21	990
Railway property, 100m North of Ferry Street	0900 to 0959	39	990
Inglis Street, 150m North of Spar Road	1000 to 1059	62	990
Inglis Street, 150m North of Spar Road	1100 to 1159	83	990
Inglis Street, 150m North of Spar Road	1200 to 1259	133	990
Inglis Street, 150m North of Spar Road	1300 to 1359	154	990
Inglis Street, 150m North of Spar Road	1400 to 1459	174	990
Inglis Street, 150m North of Spar Road	1500 to 1559	197	990
Inglis Street, 150m North of Spar Road	1600 to 1659	220	990

### VOC Monitoring

Monitoring Method	Yes	No
Sustained Odours Observed		•
P.I.D. Required	•	